

AC 4624
BURGH OF GREENOCK.



ANNUAL REPORT

ON THE

HEALTH OF THE BURGH

FOR THE YEAR, 1928,

BY

ALEXANDER JOHNSTONE, *M.C., M.A., M.D., D.P.H.*

MEDICAL OFFICER OF HEALTH.

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MEDICAL OFFICER OF HEALTH.

LIST OF STAFF.

Medical Officer of Health.

Alexander Johnstone, M.C., M.A., M.D., D.P.H.

Assistant Medical Officer of Health.

Rose E. Macmillan, M.D., D.P.H.

Resigned 15th May.

Dorothea I. Baird, M.B., Ch.B., D.P.H.

Took up duty 3rd July.

Health Visitors.

Joan M. Pollok.

Mary Duncan.

Mrs Jessie Macfarlane.

Jean Wood.

Mrs Jessie Gillespie.

In addition, all the Nurses of the Greenock and District Nursing Association act as part-time Health Visitors under the Maternity and Child Welfare or Tuberculosis Schemes.

Corporation Midwife.

Catherine Wishart.

Resigned 15th May.

Public Health Staff.

John McCrone, Epidemic Inspector.

Minnie Sinclair.

Elsie C. Greenham.

Ellen S. Clark.

Margaret C. MacElwee.

Helen C. Bog.

Maternity Hospital.

Dorothy F. Wells, Matron.

Theresa McConnell.

Jean S. Thom.

Resigned 1st November.

Elizabeth Moles.

Took up duty 1st November.

Venereal Diseases Special Treatment Centre.

John Carson, Orderly.

Disinfecting Station.

Patrick O'Kane, Station Disinfecting Officer.

Daniel McLean, District Disinfecting Officer.

Reception House.

Barbara Byle, Matron.

Part-Time Officers.

James Laurie, M.B., C.M. }

John Miller, M.B., Ch.B. }

Surgeon-Accoucheurs.

Randolph Douglas, L.D.S., D.D.S., L.R.C.P., Dental Surgeon.

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To the Department of Health for Scotland,
and the Local Authority of the Burgh of Greenock.

GENTLEMEN,

I beg to submit the Annual Report on the Health and Sanitary Condition of the Burgh for the year 1928.

A severe epidemic of measles was the chief happening of epidemiological importance, and this had a marked effect on the health of the infant population, which is shown in the various figures given in the Report.

The tuberculosis death-rate again shows a reduction, and is the lowest recorded in the Burgh statistics.

Dr. R. E. Macmillan, after eight years of splendid and unstinted service in the Child Welfare Department, resigned during the year to take up similar duties in Edinburgh. Dr. Dorothea I. Baird was appointed in her place.

I wish to thank the staff of the department for their loyal assistance throughout the year.

I am,

Gentlemen,

Your obedient Servant,

ALEXANDER JOHNSTONE,

Medical Officer of Health.

Public Health Department.

Greenock,

11th June, 1929.

STATISTICAL SUMMARY.

1928.

Population as estimated at the middle of 1928,	79,204
Acreage of burgh,	3,170
Density of population per acre,	24.90
Birth-rate,	24.1
Illegitimate birth-rate per 100 births,	4.7
Marriage-rate (uncorrected),	5.9
Death-rate—all causes,	15.7
Death-rate—all tuberculosis,	1.14
Death-rate—tuberculosis of respiratory system,	0.80
Death-rate—principal epidemic diseases,	1.98
Infantile mortality rate,	150.

All rates given are corrected for transfers.

PUBLIC HEALTH DISTRICTS

A—EAST DISTRICT—corresponds to municipal wards Nos. I, II., and III.

B—EAST CENTRAL DISTRICT—corresponds to municipal wards Nos. IV. and V.

C—WEST CENTRAL DISTRICT—corresponds to municipal wards Nos. VI. and VII.

D—WEST DISTRICT—corresponds to municipal ward No. VIII.

Medical Officer's Report

for the Year 1928.

VITAL STATISTICS.

POPULATION.—The Registrar General's estimate of the population of the burgh to the middle of 1928 was 79,204, and this figure has been used as the basis for all statistical calculations.

An estimate of the population made in this department from the voter's roll 1929 indicates the population to be in the region of 79,600.

The natural increase of population (i.e. excess of births over deaths) was 658, the average for the last five years being 851.

BIRTHS AND BIRTH-RATE.—The number of births registered during 1928 was 1,882. This number on correction becomes 1,905 (947 males and 958 females), and the equivalent rate is 24.1. This is the highest birth-rate recorded since 1925, but is still below the mean for the last five years, which is 24.3. Tables I. and IV. give further information in this connection.

INFANTILE MORTALITY.—The number of deaths of children under 1 year was 228, which is very much higher than last year, and indeed is the highest since 1922. The corresponding infantile mortality rate is 120, which is also the highest figure since the year 1922, and considerably higher than the last five years average, namely 95.

This increase is mainly due to the comparatively large number of deaths from measles, whooping cough, and diarrhoea and enteritis, which were all prevalent during the year.

Atrophy, debility and marasmus were responsible for 20.61 per cent. of the total infantile deaths, premature birth 11.84 per cent., pneumonia 10.95 per cent., measles 10.52 per cent., whooping cough 7.89 per cent., diarrhoea and enteritis 6.14 per cent., bronchitis 5.70 per cent., and convulsions 4.82 per cent.

DEATHS AND DEATH-RATE.—The number of deaths registered in the burgh was 1,277, and the gross death-rate is 16.1. When corrected for transfers the figures become 1,247 (621 males and 626 females) and 15.7 respectively. This rate is considerably higher than that of any year since 1922, the average for the last five years being 13.8. The average age at death was 37.39 years.

CAUSES OF DEATH.—The following were the chief causes of death during 1928:—Pneumonia 134, heart disease 120, malignant tumours 111, apoplexy 108, tuberculosis (all forms) 90, bronchitis 62. The deaths may be conveniently grouped as follows, and further information will be found in Tables II. and III.

Principal Epidemic Diseases.—These diseases were responsible for 157 deaths during the year and this produces a death-rate of 1.98, which is a high figure, being considerably above the average for the last five years, namely 0.80.

The principal cause for the undue number of deaths in this group was the prevalence of measles, whooping cough and diarrhoea and enteritis, which were responsible for 81, 41 and 20 deaths respectively, mostly in children under five years of age. Diphtheria produced 14 deaths, 13 of which were in children under 10.

Other Epidemic Diseases.—This group was the cause of 25 deaths, which is equivalent to a death-rate of 0.31. Influenza was responsible for 14 deaths; it was the sole cause in 2, was complicated by pneumonia in 7, by bronchitis in 3 and by other causes in 3. Infantile Paralysis produced 5 deaths, encephalitis lethargica 2, cerebro-spinal meningitis 2, and erysipelas 1.

Tuberculous Diseases.—During the year the number of deaths from pulmonary tuberculosis was 63, and the corresponding death-rate is 0.80. This rate is considerably under last year's figure of 0.87, and the average for the last five years which is 0.93. Tuberculosis of the meninges, abdomen and other organs caused 11, 6 and 10 deaths respectively, and the non-pulmonary death-rate is 0.34 as against 0.44 in 1927 and 0.45 the previous quinquennial average.

The total tuberculosis death-rate, therefore, is 1.14 which is the lowest figure yet recorded. The average for the last five years is 1.39. Further information will be found on Table IV.

The only notable fact with regard to these deaths is that all of those from abdominal tuberculosis fall between the ages of 5 and 25 years, which is a most unusual occurrence.

Pneumonia.—The deaths from this cause numbered 134, and the death-rate is 1.69. Those of broncho-pneumonic type amounted to 68 and the large majority occurred in children under five years of age, while the unspecified forms chiefly affected persons over 35 years. Last year's rate was 1.19 and the average of the last five years was 1.40.

Bronchitis.—This condition accounted for 62 deaths, and the chief periods of life affected were from birth to five years of age and from 55 upwards. The death-rate is 0.78 as against 0.92 last year and the previous quinquennial average 0.90.

Other Respiratory Diseases.—These conditions caused 13 deaths as follows:—Pleurisy 4, congestion of lung 4, asthma 3 laryngitis 1, disease of nose 1.

Total Respiratory Diseases.—The total number of deaths due to respiratory conditions, apart from tuberculosis, was, therefore, 209, which figure gives an equivalent death-rate of 2.63.

Cancer.—The mortality due to malignant tumours amounted to 111 deaths (47 males and 64 females). The death-rate is 1.41. The organs of the body principally affected were as follows:—Stomach 40, bowel 20, female genital organs 14, breast 9.

As has already been remarked in previous reports, the deaths from cancer appear to be steadily increasing, and this is the highest number yet recorded in the burgh statistics, the average for the last eight years being 93.

Heart Disease.—The number of deaths from heart disease was 120, and the large majority occurred in persons over 45 years of age. The corresponding death-rate is 1.51, which is to be compared with 1.38 in 1927 and 1.26 the last five yearly average.

Apoplexy.—Apoplexy accounted for 108 deaths, mostly in persons over 55. These are classified by the Registrar General as cerebral hæmorrhage, 98; cerebral embolism and thrombosis, 9; apoplexy, 1. This equals the 1921 figure, and is the highest number of deaths from this cause for very many years. The death-rate is 1.36 and the mean of the last quinquennium is 1.13.

Maternal Deaths.—These amounted to 13 and included the deaths of all women who died during or within four weeks of confinement or abortion, or later if definitely connected therewith. They may be conveniently classified as follows:—Sepsis (including 1 abortion), 3; toxæmia of pregnancy, 2; operation deaths (caesarean section), 2; abnormalities, 1; heart disease (previously existing), 2; lobar pneumonia (intercurrent), 1; sudden deaths (definite cause unknown), 2.

After investigation it was found that only five of these deaths could in any sense of the word have been called preventable, and

the total figure appears to have been unduly large during the year owing to deaths which are not very likely to happen in an average year..

The number last year amounted to 6 and the average for the last five years is 10.

Diseases of Early Infancy and Malformations—These amounted to 91 and they are sub-divided by the Registrar General as follows:—Malformations, 16; congenital debility and marasmus, 41; premature birth, 27; injury at birth 1; others, 6. Last year these deaths amounted to 74 and the average of the last five years is 88. Further information regarding the deaths of children under 1 year of age will be found in the maternity and child welfare section.

STATISTICAL COMPARISON.—The following Table gives a comparison of the various rates in the different public health districts and the average age at death in each as estimated in this department:—

District.	A.	B.	C.	D.
	East.	East Central.	West Central.	West.
Population,	24,739	16,497	25,004	12,964
Density per acre.	22.08	121.30	40.29	10.00
Birth-rate,	29.42	21.88	26.83	11.18
Infantile mortality-rate, ...	122.25	130.19	113.29	110.34
General death-rate,	16.85	14.31	16.43	14.27
Tuberculosis death rate, ...	0.97	1.51	1.31	0.61
Average age at death,	33.30	31.35	37.29	54.50

INFECTIOUS DISEASE.

The total number of cases of infectious disease ascertained during 1928 was 3,888, which is considerably above last year's figure of 2,328 and the mean of the previous quinquennium, namely 2,663.

As will be seen below this increase was largely due to the epidemic prevalence of measles, and to a less extent of whooping cough.

Further information with regard to infectious disease will be found in Tables V. to X.

MEASLES.—There were notified 2,335 cases, mostly during the first four months of the year, with the epidemic peak in February. Last year's number was 628 and the previous five yearly average 1,025. Nineteen cases had also whooping cough, 7 had diphtheria

and 1 had chickenpox. The disease occurred in severe form and was responsible for 81 deaths, all but one of which were in children under five years. The incidence rate over the whole community was 2.93, and the fatality rate 3.46. As 1,509 of the children attacked were under school age, the incidence rate in children under five years is 164.41 and the fatality rate 5.30.

In the light of these figures measles, when epidemic, cannot be regarded as other than a grave condition and a serious menace to the life of the young population of the community. Nothing more should be needed to show how dangerous is the old fashioned method of putting all the children to sleep together when one contracts measles in order that they may all have it together, and how strenuous should be the domestic endeavour to prevent the illness attacking especially children under five years of age.

Thirty cases were admitted to hospital for treatment, but it is hoped to make more extensive use of institutional accommodation on future occasions if suitable arrangements can be made.

WHOOPING COUGH.—Of this condition 676 cases were notified, particularly in the first five months of the year, with the highest number in April. Last year's figure was 429 and the quinquennial mean 475. Nineteen of the cases had also measles.

The disease was of moderately severe type and caused 41 deaths, of which 40 were in children under five years of age. The incidence rate was 0.85 and the fatality rate 6.06. As 374 of the persons attacked were under five years of age the incidence rate at that period of life was 40.74, and the fatality rate 10.69.

SCARLET FEVER.—Sixty-seven cases were notified and were distributed more or less evenly throughout the year, with the highest figures in October and November. This is an exceptionally low number as compared with last year's 282, and the average for the previous five years which is 262. There was one death and the fatality rate is, therefore, 1.34. One of the cases had also diphtheria and one chickenpox, while one was later diagnosed measles and one urticaria.

DIPHTHERIA.—There were 231 cases of diphtheria discovered during the year, and although the last four months' figures were definitely higher than the remainder, the disease could at no time be said to be epidemic. The number last year was 259, and the last five yearly mean 192. The incidence rate is 0.29. The deaths numbered 14 and the case mortality rate is, therefore, 6.06. Seven cases had also measles, one had chickenpox and one scarlet fever, while two cases were later diagnosed as quinsy.

Contacts.—During 1928 the routine swabbing of all contacts was given up and the procedure was carried out only where the circumstances seemed to warrant it. The throats of 207 persons were swabbed in this way, and 13 who gave a positive reaction were removed to hospital. Three of these developed symptoms of illness.

PNEUMONIA.—One hundred and forty-seven cases were discovered, 61 of the acute primary type, 11 influenzal and 75 presumably secondary to some other condition. The greatest incidence fell in the first four months and the last month of the year. The average number of cases for the last five years is 112.

The number of deaths from this cause was 134, but it is impossible to correlate that with the number of cases, as the notification was manifestly far from complete, 97 of the total being discovered in the death returns.

Hospital beds were available for the treatment of pneumonia but no cases of acute primary or influenzal type were sent to Gateside Hospital. A considerable number were, however, treated in Greenock Royal Infirmary. It is a debatable point whether cases of pneumonia, when the home permits of proper nursing care, are not better left where they are, but there is no doubt about the benefit where housing conditions are as bad as they are in certain parts of the burgh.

ENTERIC FEVER.—Five cases of enteric fever were notified during the year, as against 14 last year, and the previous five yearly average of 12. There were no deaths. Three of the cases were of the paratyphoid B. group, one of paratyphoid A., and the other was a very doubtful case as the widal reaction remained persistently negative.

This last case was a patient in Smithston Hospital and was isolated and treated there. A sister of one of the paratyphoid B. cases gave a history of typhoid fever 20 years ago, and on examination her blood showed a positive reaction for paratyphoid B., but the germ could not be discovered in her excreta. The cases were all sporadic, and no source of origin or connection between them was found.

CHICKENPOX.—Three hundred and fifty-one cases were notified mostly in the first month and last quarter of the year. There were no deaths. The number last year was 530 and the last five yearly average 506.

All except one case were in children under 15 years of age and mostly of extremely mild type.

In July, on the instructions of the Scottish Board of Health, verification of the diagnosis in all unvaccinated cases was begun, and although it entailed a very large amount of work and took up a great deal of time which could ill be afforded, was continued until the end of the year. By the Public Health (Chickenpox) Amendment Regulations (Scotland) 1928, dated 28th November, 1928, the notification of this condition will be continued until 31st December, 1930.

PUERPERAL FEVER.—Seven cases of this condition were notified during the year. Four of them were treated in hospital, and three at home. The number last year was 7 and the average for the previous quinquennium is 10.

There were two deaths and the fatality rate is thus 28.57 and as there were 1,902 births notified during the year, the incidence is 3.68 per 1,000 births. Complete hospital facilities were available in Gateside Infectious Diseases Hospital.

The notification of this disease has never been satisfactory, chiefly because it is not a clearly defined pathological condition, and because of the natural reluctance of the medical practitioner to admit the occurrence of sepsis unless the need for institutional treatment is considered necessary. The root of the matter then appears to be one of more exact definition, and several have been suggested, but none of these is in all respects satisfactory. It would, therefore, seem to be desirable for the Central Authority to give a lead by laying down an exact definition of the condition to be notified, if only on an experimental basis, and experience would in time lead to one which could be useful in practice. The introduction of the term "puerperal morbidity" only tends to complicate the question without getting any nearer the desired end, namely the complete notification of puerperal fever.

At a meeting of the Greenock and District Faculty during 1929 it was proposed that the following definition should be adopted as the local standard of notification:—"The occurrence of pyrexia over 100° F. on two succeeding days from the end of the first to the end of the eighth day of the puerperium which is not due to some other definite abnormality." This has not so far been actually accepted, but it is hoped that it will be given a trial in the near future.

ACUTE ANTERIOR POLIOMYELITIS.—Sixteen cases of infantile paralysis were notified during the year, extending over the period May to December. When it appeared that cases were becoming comparatively frequent a circular letter was in September addressed to all medical practitioners drawing their attention to the presence of the disease in the community and reminding them of the necessity for notification.

All the cases were specially investigated and it was found that the onset of the disease was as follows:—November, 1927, 1; January, 1928, 1; April, 1; May, 1; June, 2; July, 1; August, 4; September, 3; October, 2. The age periods at incidence were:—0—1, 2; 1—2, 6; 2—3, 2; 3—4, 1; 4—5, 1; 5—10, 3; 10—20, 1. There appeared to be no direct connection between them no common factor could be found, nor were the circumstances of onset similar in any of the cases. The investigation, however, was handicapped by the fact that the initial illness was in the majority well past before notification was received.

The incidence of the disease was discovered in two additional cases from the death returns; there were, therefore, 18 known cases, and as the deaths numbered 5, the fatality rate was 27.77. Another patient died later from gastro-enteritis and broncho-pneumonia.

A survey of the results made during April, 1929, showed that the general condition was good in 10 and poor in 2. The local condition was greatly improved in 4, improved in 6, and not improved in 2. Four were attending Greenock Royal Infirmary for massage and electrical treatment, 2 the maternity and child welfare clinic, 1 the Glasgow Royal Hospital for Sick Children, and 2 were being cared for privately.

SMALLPOX—There were no cases of this disease during the year.

Vaccination.—The number of conscientious objections to vaccination lodged during 1928 was 1,019 (East registration district 553; West registration district 466) and as the number of births registered during 1927 to which that figure referred was 1,758, it is probable that nearly 60 per cent. of young children in the burgh are unprotected by vaccination. The position is thus materially unchanged from last year, when special attention was drawn to it.

Two hundred and thirty-two vaccinations were carried out on 201 children under the maternity and child welfare scheme at the Shaw Place clinic. One hundred and seventy-eight were successful on the first occasion, 15 on the second and 5 on the third, while 3 children were considered insusceptible after three unsuccessful attempts had been made.

PULMONARY TUBERCULOSIS.

The number of cases on the register at the end of the year 1927 was 574. During the year under review 130 cases were notified and 3 previously removed were readmitted, 58 left the district, 78 died, 49 were struck off as non-tuberculous and 10 as not requiring further supervision, leaving 512 (284 males and 228 females) on the register at the end of the year.

Particulars of age periods, etc., are as follows:—

		0-5	5-10	10-15	15-25	25-35	35-45	45-65	65 up.	Total.
Tubercle Bacilli found,	Males, -	—	—	1	6	17	10	4	—	38
	Females,	—	—	—	10	10	7	12	—	39
Tubercle Bacilli not found,	Males, -	2	17	35	58	47	36	48	3	246
	Females,	2	20	36	48	29	28	25	1	189

In addition 32 were under regular observation as suspects, and 12 as contacts of known cases.

NOTIFICATION.—One hundred and thirty cases (79 males and 51 females) were notified as suffering from pulmonary tuberculosis. The number last year was 134 and the last five yearly average 140.

The age periods are as follows:—

		0-5	5-10	10-15	15-25	25-35	35-45	45-65	65 up.	Total.
Males, -		3	9	5	14	22	18	8	—	79
Females, -		1	5	2	14	15	8	6	—	51

The sputum of 34 of these patients contained tubercle bacilli, 33 died before the end of the year, and the average period of survival was 58 days, while in two the condition was first disclosed by the death returns. In addition 8 left the district, in 6 the diagnosis was not verified, and 25 were still under observation as doubtful at the end of year.

The following Table shows the home conditions of the cases and the percentage of the total cases in houses of different sizes compared with the estimated percentage of such houses in the whole of the burgh:—

	Number of Cases.	Percentage of Total.	Approximate Percentage of Total Houses in the Burgh.
1 Apartment, - - - -	23	18	11
2 Apartments, - - - -	54	42	46
3 Apartments, - - - -	25	20	25
4 Apartments, - - - -	9	6	8
5 Apartments and over, - -	3	2	9
Institutions, Lodginghouses, etc.	16	12	—

DISPENSARY.—The work of the dispensary was carried out on the same general lines as last year, but four mornings per week were devoted to it. On Monday all newly notified cases who were able to attend were seen, along with any referred by doctors for examination and opinion. On Tuesday and Friday old cases were seen, domiciliary treatment arranged, and general routine work carried out. On Thursday routine re-examinations were done. The number of persons attending the dispensary was 536, the total number of primary visits was 161, and the number of re-visits 2,511.

Two hundred and sixty-four X-ray examinations of the chest were carried out at the Greenock Royal Infirmary, the arrangements remaining unchanged.

DOMICILIARY TREATMENT.—After 15th May milk, eggs and butter became the articles of extra diet allowed, and the supply of oatmeal and sugar was discontinued as was foreshadowed in last year's report. Eighty-seven persons received extra nourishment in this form during the year.

INSTITUTIONAL TREATMENT.—The Renfrewshire Joint Sanatorium Board made considerable progress with the provision of the proposed sanatorium at Lochwinnoch, and all the constituent authorities agreed that the project should be carried through. The institution will be used primarily for the treatment of non-pulmonary cases and will contain approximately 110 beds. The plans were in course of preparation at the end of the year.

The following Table gives the numbers treated in the various institutions used, and their condition on discharge:—

	Manor Valley Sanatorium.	Noramside Sanatorium.	Bridge-of-Weir Sanatorium.	Marillac Sanatorium, Warley, Essex.	Hairmyres Colony.	St. Andrew's Sanatorium.	Gateside Hospital.	Smithston Pavilion.
Number at 1st January, 1928,	2	8	10	..	5	..	24	12
Admitted during the year, ..	..	15	13	1	4	..	44	25
Treated during the year, ..	2	23	23	1	9	..	68	37
Total number discharged, ..	2	15	7	..	5	..	11	14
" " much improved, ..	1	1	2	..	..	..	8	4
" " improved, ..	..	12	3	..	4	..	8	7
" " stationary, ..	..	2	..	..	1	..	3	2
" " worse, ..	1	..	2	..	..	..	..	1
Left against advice, ..	..	1	..	..	1	..	14	6
Died, ..	..	2	1	1	1	..	19	7
Transferred to hospital, ..	..	1	..	..	..	..	..	..
Remaining at 31st Dec., 1928,	..	4	15	..	2	..	24	10

HOME SUPERVISION.—A definite schedule of instructions was drawn up for the visiting nurses during the year, and an attempt was made to visit all patients as a routine at least every two months, while special visits were made when necessity arose.

NON-PULMONARY TUBERCULOSIS.

The number on the register at the end of 1927 was 319. During the year 61 new cases were notified, 14 left the district, 20 died, 12 were struck off as non-tuberculous, and 20 as not requiring further supervision, leaving 314 (161 males and 153 females) on roll at 31st December, 1928.

The age periods and situation of lesions are shown in the following Table:—

LESION.			Under 5 years	5—10 years	10—15 years	15—25 years	25—35 years	35—45 years	45—65 years	65 upwards	Total
Abdomen, 	{	Males	3	18	14	8	1	1	...	...	45
		Females	2	8	8	4	2	...	...	...	24
Spine, 	{	Males	2	7	5	6	2	2	1	...	25
		Females	...	2	3	4	1	...	...	...	10
Bones and Joints (ex- clusive of Spine), ...	{	Males	7	9	9	16	2	1	2	...	46
		Females	6	8	12	16	3	5	3	1	54
Superficial Glands, ...	{	Males	3	5	11	7	1	3	...	...	30
		Females	...	5	12	15	5	6	2	1	46
Lupus, 	{	Males	...	1	1	2	...	...	2	...	6
		Females	...	1	1	...	...	2	1	1	6
Other Parts and Organs	{	Males	...	1	1	5	...	1	1	...	9
		Females	...	1	3	3	3	2	1	...	13
Total 			23	66	80	86	20	23	13	3	314

NOTIFICATION.—The number of new cases notified was 61 as against 59 last year and 56 the average for the last five years.

The following Table shows those cases classified according to age groups and situation of lesion:—

LESION.			Under 5 years	5—10 years	10—15 years	15—25 years	25—35 years	35—45 years	45—65 years	65 upwards	Total	
Abdomen ...	...	...	{ Male	1	2	2	...	1	...	...	6
			{ Female	1	1	1	...	1	...	...	4
Spine, ...	...	...	{ Male	1	1	1	1	1	...	...	5
			{ Female	1	1	...	2
Bones and joints	...	...	{ Male	3	4	1	1	...	...	...	9
			{ Female	2	2	2	1	1	...	8
Superficial Glands	.	.	{ Male	1	1	...	...	1	...	...	3
			{ Female	...	2	...	3	3	...	1	...	9
Lupus ...	...	...	{ Male	...	...	...	...	...	...	...	...
			{ Female	...	1	1
Other Parts and Organs	}	}	{ Male	...	2	2	...	1	1	...	6	
			{ Female	3	4	1	8
Total, ...				12	20	11	6	7	2	3	...	61

The home conditions of the various notified cases were found to be as follows:—

	Number of Cases.	Percentage of Total.	Approximate Percentage of Total Houses in the Burgh.
1 Apartment, - - - -	12	20	11
2 Apartments, - - - -	27	44	46
3 Apartments, - - - -	14	23	25
4 Apartments, - - - -	5	8	8
5 Apartments and over, - -	2	3	9
Institutions, Lodginghouses, etc.	1	2	—

DISPENSARY.—The number of patients who attended the dispensary during the year was 105. The total number of primary visits was 53 and the number of re-visits 1,527. The routine work was carried out on the same lines as last year.

The use of the tungsten arc lamp was continued during the major portion of the year for ultra-violet light treatment, but it was discontinued in November when a suspended mercury vapour lamp of the Kelvin, Bottomley and Baird atmospheric type was installed in the dispensary, and both local and general light baths were given at bi-weekly sessions.

The following conditions were treated:—

General Debility,	- - - -	7
Tuberculosis of Superficial Glands,	-	22
„ Bones and Joints,	-	14
„ Skin, - - - -	-	9
„ Ribs, - - - -	-	2
„ Spine, - - - -	-	2
„ Other Organs,	- -	3

An improvement in general health and feeling of wellbeing were noted in all the patients, and the local results were encouraging particularly in lupus and other superficially placed lesions, except those of a hypertrophic nature, which did not respond so readily.

The cost of the new lamp and its installation was £28 and the period during which it was in actual use was approximately 25 hours.

The number of X-ray examinations carried out was 19.

DOMICILIARY TREATMENT.—Twenty-eight cases received domiciliary treatment in the form of extra nourishment.

INSTITUTIONAL TREATMENT.—The following Table gives the numbers treated in the various institutions used and their condition on discharge:—

	Manor Valley Sanatorium.	Noranside Sanatorium.	Bridge-of-Weir Sanatorium.	Marillac Sanatorium.	Hairmyres Colony.	St. Andrew's Sanatorium.	Gateside Hospital.	Smithston Pavilion.
Number at 1st January, 1928,	1	...	1	4	6	7
Admitted during the year,	10	13	3
Treated during the year	1	...	1	14	19	10
Total number discharged,	1	...	1	1	3	2
" " much improved.	1
" " improved,	1	...	3	1
" " stationary,
" " worse,	1	...	...	1	...	...
Left against advice,	10	1
Died,	1	2
Transferred to hospital,
Remaining at 31st Dec., 1928,	13	5	5

ALL TUBERCULOSIS.

The number on the tuberculosis roll at the end of the year was, therefore, 826.

The number of persons who attended the dispensary was 641 and the total attendances amounted to 4,252, as against 5,390 last year, and 3,784, the average for the last five years.

The number of patients visited in their homes by the nurses during the year was 1,021, and the total supervisory visits amounted to 6,289.

The number of persons who received extra nourishment was 115 as against 246 last year, and 243 the last 4 years' average. The total cost of this service was approximately £447 2s 4d, or £8 12s 0d per week.

The number of prescriptions paid for by the Local Authority was 345 and the total cost £48 2s 2d, or 3/11 per patient per month and 2/10 per prescription.

In addition to the above the following assistance was provided by the Renfrewshire Memorial to the late King Edward Fund:—

Rent fully paid for a period, - -	5
Rent part paid for a period, - -	3
Clothing and boots, - - -	1
Clothing, - - - - -	15
Boots, - - - - -	1
Food Allowance for Family, - -	1

MATERNITY SERVICE AND CHILD WELFARE SCHEME.

The chief feature of the year from the point of view of child welfare was the epidemic prevalence of measles in a severe form. It was considered advisable to institute a special service of domiciliary visiting and 1,781 special visits were made by the Health Visitors in this way during the first four months of the year.

The provision of milk and dried milk substitutes was put on a definite basis, the details of which will be found in that section of the report.

The Corporation midwife resigned during the year and no further appointment was made, but a new scheme for the provision of midwifery services in necessitous cases was instituted, which included obligatory attendance at the ante-natal clinic. Further time will be required before the results of this measure can be accurately assessed.

In November an out-patient ultra violet light clinic was opened in the Public Health Department, two afternoon sessions per week being held. These sessions were well attended, and the results in rickety children have so far been very encouraging.

The provision of a new general clinic in the annex of the Reception House was under consideration at the end of the year and will soon be in operation. It has been felt for some time that an east end centre is overdue owing to the fast growing population resident in the neighbourhood, and the long distance it is necessary for many mothers to travel to the existing one.

The department has again to thank Mr Riddell and Mr Gray of the R.S.S.P.C.C. for their very helpful assistance in many different ways.

INFANTILE MORTALITY.

Number of Deaths,	228
Rate per 1000 Births,	119.68

Number of Deaths and Rate per 1000 Births classified according to age groups and causes of death:—

CAUSES OF DEATH.	AGE GROUPS.					Total Deaths.	Rate per 1,000 Births.
	Under 1 week	1—4 weeks	4 weeks—3 months.	3 months—6 months.	6 months—12 months.		
Chickenpox, ... ..	...	...	...	...	...	...	...
Measles, ... ..	...	1	...	3	20	24	12.60
Scarlet Fever, ... ..	...	...	...	...	...	...	...
Whooping Cough, ... ..	...	...	2	4	12	18	9.45
Diphtheria and Croup, ... ..	...	...	...	...	1	1	0.53
Erysipelas, ... ..	...	...	...	...	1	1	0.53
Tuberculous Diseases, ... ..	...	...	...	2	...	2	1.05
Meningitis (non-tuberculous), ... ..	...	...	1	1	6	8	4.20
Hydrocephalus,	1	1	...	1	...	3	1.57
Convulsions,	2	2	3	4	...	11	5.77
Pneumonia (all forms),	1	1	1	5	17	25	13.12
Bronchitis, ... ..	...	3	1	5	4	13	6.82
Diarrhoea and Enteritis, ... ..	...	...	4	5	5	14	7.35
Other Digestive Diseases,	1	...	...	1	1	3	1.57
Congenital Malformations,	4	4	3	...	...	11	5.77
Congenital Heart,	3	...	...	1	...	1	0.53
Premature Birth,	20	4	...	...	...	27	14.17
Atrophy, Debility, & Marasmus,	32	...	10	2	3	47	24.67
Atelectasis,	1	...	...	...	...	1	0.53
Injury at Birth,	1	...	...	...	...	1	0.53
Suffocation, Overlaying, ... ..	...	...	...	...	...	...	...
Syphilis, ... ..	...	...	...	...	...	...	...
All other Causes,	2	3	2	5	5	17	8.92
Total Deaths,	68	19	27	39	75	228	119.68
Rate per 1000 Births,	35.70	9.97	14.17	20.47	39.37		

BIRTHS.

Number Registered (corrected).	{ Legitimate, 1,816 } { Illegitimate, 89 }	1,905
Number Notified, ... ..	...	1,902

Notified births classified according to nature of attendance:—

Medical Practitioner,	317
Midwife,	1,479
Institutions,	106

Number of stillbirths (Births of dead children),	55
Of these 8 occurred in the Maternity Hospital where abnormal cases are treated.	

MATERNAL MORTALITY.

Number of deaths resulting from miscarriage or childbirth,	13
Number of deaths resulting from sepsis,	3

HOME VISITATION.

(1) Infants—

Number of children visited,	2,927
Number of first visits, 1,739, }	10,899
Number of re-visits, 9,160, }	

Number of infants at age of 6 months—

(i) Breast fed,	828
(ii) Partially breast fed,	185
(iii) Artificially fed,	456

Number of Infants born—

(i) Prematurely,	35
(ii) At full time,	1,867

(2) Children (1-5 years)—

Number of children visited,	6,910
Number of first visits, 76 }	30,401
Number of re-visits, 30,325 }	

(3) Expectant Mothers—

Number visited,	156
Number of first visits, 141 }	163
Number of re-visits, 22 }	

(4) Nursing Mothers—

Number of first visits, 159 }	205
Number of re-visits, 46 }	

ANTE-NATAL CONSULTATIONS—

Two sessions weekly of two hours each are held.

Total number of expectant mothers attending,	411
Total number of attendances, { First, 407	1,308
{	
{ Subsequent, 901	

Classified summary of conditions found :—

Adenitis,	1
Affections of nipple,	4
Albuminuria of pregnancy,	13
Anaemia and debility,	54
Ante-partum haemorrhage,	4
Cardiac disease,	15
Carious teeth,	22
Chorea,	1
Constipation,	57
Contracted pelvis,	13
Digestive disorders,	16
Epistaxis,	1
Eye conditions,	3
Genito-urinary conditions,	33
Glycosuria,	1
Goitre,	1
Gynaecological conditions,	10
Haemorrhoids,	6
Hernia,	1
Hydramnios,	1
Jaundice,	2
Leucorrhoea,	2
Mastitis,	4
Nephritis, acute,	2
Nephritis, chronic,	5
Neuritis,	2
No abnormality—advice given,	83
Oedema of feet and hands,	4
Pregnancy doubtful,	13
Prolapse of bowel,	1
Pruritis,	6
Respiratory conditions,	42
Rheumatism,	5
Skin conditions,	3
Threatened abortion,	3
Throat conditions,	5
Tuberculosis,	1
Varicose veins,	21
Venereal diseases,	10
Vomiting of pregnancy,	46
Worms,	3

Number of cases referred to ante-natal ward, ...	—
„ „ „ family doctor, ...	6
„ „ „ Greenock Royal Infirmary, ...	2
„ „ treated at clinic, ...	403

POST-NATAL AND OTHER CONSULTATIONS—

Number of attendances, {	First, 395	1,198
	Subsequent, 803	

Conditions found :—

Adenitis, ...	5
Affections of nipple, ...	6
Agalactia, ...	11
Alopecia, ..	2
Anæmia and debility, ...	242
Bursitis, ...	1
Cardiac disease, ...	2
Carious teeth, ...	106
Constipation, ...	139
Diabetes, ...	2
Digestive disorders, ...	33
Ear, nose and throat conditions, ..	16
Encephalitis lethargica, ...	1
Epilepsy, ...	1
Eye conditions, ...	16
Genito-urinary conditions, ...	19
Gynæcological conditions, ...	2
Hæmorrhoids, ...	13
Jaundice, ...	2
Mastitis, ...	17
Menorrhagia, ...	2
Neuritis, ...	2
No abnormality—advice given, ...	40
Phlebitis (arm), ...	1
Pleurisy, ...	1
Prolapse of bowel, ...	1
Pruritis, ...	2
Pulmonary tuberculosis, ...	1
Respiratory conditions, ...	51
Rheumatism, ...	18
Septic conditions, ...	28
Skin conditions, ...	12
Venereal diseases, ...	6
White leg, ...	1
Worms, ...	3

CHILD WELFARE CONSULTATIONS.

Six sessions are held weekly—four of three and a half hours,
two of two hours.

Total number of children attending—

Under one year of age,	}	at 30th June, 1928,	920
Over one year of age,			890

Total number of attendances,

Under one year of age,	..	...	...	6,241
Over one year of age,	...	...	...	4,073

Number of first attendances,

Under one year of age,	...	...	..	782
Over one year of age,	...	...	...	116

Illnesses Recorded—

Abscess,	...	...	...	43
Adenitis,	...	...	...	38
Atrophy debility and marasmus,	...	...	...	73
Cardiac conditions,	...	...	...	2
Carious teeth,	...	...	...	71
Chickenpox,	...	...	...	22
Chorea,	...	...	...	1
Congenital malformation,	...	...	...	14
Convulsions,	...	...	...	20
Diarrhœa and enteritis,	...	...	...	317
Digestive diseases,	...	...	...	178
Diphtheria,	...	...	...	4
Ear, nose and throat conditions,	...	...	...	114
Eye conditions,	...	...	...	80
Erysipelas,	...	...	...	1
Fracture,	...	...	...	2
Genito-urinary conditions,	...	...	...	11
Hernia, inguinal,	..	...	...	28
Hernia, umbilical and polypus,	...	...	...	45
Herpes,	...	...	...	4
Infantile paralysis,	...	...	...	7
Injuries,	...	..	...	24
Jaundice,	...	...	...	7
Mastitis,	...	...	...	11
Mastoid diseases,	...	...	...	3
Measles,	...	...	...	22
Mental deficiency,	...	...	...	5
Mumps,	...	...	...	3

No abnormality—advice given, ...	...	150
No abnormality—vaccination performed, ...	...	232
Other respiratory diseases, ...	...	289
Paralysis of bowel, ...	...	2
Phimosis, ...	...	123
Pleurisy, ...	...	15
Pneumonia, ...	...	50
Prolapse of bowel, ...	...	8
Pyrexia, ...	...	16
Raynaud's disease, ...	...	1
Rheumatism, ...	...	1
Rickets, ...	...	152
Scarlet fever, ...	...	2
Septic conditions, ...	...	44
Skin conditions, ...	...	220
Stomatitis, ...	...	62
Talipes, ...	...	6
Tetany, ...	...	4
Tongue tie, ...	...	83
Tuberculosis (abdominal), ...	...	4
Tuberculosis (other organs), ...	...	4
Underweight, ...	...	601
Venereal diseases, ...	...	10
Whooping cough, ...	...	117
Worms, ...	...	53
Other diseases, ...	...	5

SPECIAL TREATMENT CENTRES—

Teeth—Corporation Dental Clinic.

Number of attendances—

Mothers, expectant, 17 }	...	...	145
Mothers, nursing, 128 }	...	...	58
Children, ...	...	...

Classified summary of conditions remedied—

Mothers—

Carious teeth extracted (local anæsthetic),	119
Carious teeth extracted (no anaesthetic),	1
Gums treated, ...	25

Children—

Carious teeth extracted (local anæsthetic),	23
Carious teeth extracted (general anæsthetic),	11
Carious teeth extracted (no anæsthetic),	19
Gums treated, ...	5

Number of dentures supplied—

Upper dentures,	2
Lower dentures,	—

Practically all the cost of these dentures was recovered.

Eyes—Greenock Eye Infirmary.

Number of attendances (children),	800
--	-----

Classified summary of conditions remedied—

Abscess of eyelid,	3
Abscess lachrymal,	2
Blepharitis,	18
Burn of eyelid,	1
Cellulitis of eyelid,	1
Coloboma iridis,	1
Conjunctivitis,	43
Conjunctivitis, purulent,	13
Conjunctivitis, traumatic,	6
Corneal abrasion,	5
Corneal ulcer,	5
Cyst of eyelid,	4
Dislocation of lens,	1
Ecchymosis, traumatic,	2
Epiphora of eyelid,	1
Foreign body in eye,	3
Hordeolum,	1
Keratitis,	16
Nebula,	1
Nystagmus,	1
Obstruction of lachrymal duct,	1
Ophthalmia Neonatorum,	11
Ophthalmia, phlyctenular,	7
Ophthalmia, strumous,	14
Strabismus,	28
Wound of conjunctiva,	1

Ear, Nose and Throat—Greenock Dispensary.

Number of attendances,	646
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Classified summary of conditions—

Abscess, mastoid,	4
Abscess, infra-auricular,	1
Abscess, neck,	1
Abscess, pre-auricular,	1
Adenitis,	4
Adenitis, pre-auricular,	5
Adenoids and nasal catarrh,	3
Cerumen,	1
Discharge from nose,	1
Eczema auris,	4
Enlarged tonsils (12 Tonsillectomy),	35
Foreign body in ear,	2
Injury to nose,	1
Irritation in larynx,	1
Otitis media, catarrhal,	1
Otitis media, acute suppurative,	44
Otitis media, chronic suppurative,	28
Pharyngitis,	2
Rachitis,	1
Rhinitis,	12
Rhinitis neonatorum,	4
Syphilis,	2
Unhealthy throat,	6

Other Aliments—Greenock Royal Infirmary.

Number of attendances,	2,938
Number who received in-patient treatment,	123

Summary of conditions:—

Abscess,	73
Accident,	145
Adenitis,	9
Adenoids,	1
Appendicitis,	2
Atrophy, debility and marasmus,	6
Burn.	88
Cancrum oris,	1
Carious teeth,	2

Cellulitis,	13
Chickenpox,	1
Concussion,	2
Convulsions,	2
Cystitis,	1
Digestive diseases,	5
Dislocation,	1
Drop foot,	1
Empyema,	5
Encephalitis lethargica,	1
Enteritis,	21
Eye conditions,	1
Fracture,	31
Hernia, inguinal,	18
Hernia, umbilical,	1
Hydrocele,	2
Infantile paralysis,	15
Influenza,	1
Intussusception,	1
Iodine poisoning,	1
Jaundice,	3
Joint conditions,	1
Malformation,	1
Mastitis,	2
Mastoiditis,	8
Meningitis,	1
Nephritis,	2
Phimosis,	106
Pneumonia,	22
Prolapse of rectum,	6
Respiratory conditions,	12
Septic conditions,	5
Skin conditions,	15
Stomatitis,	4
Stricture, meatus,	1
Talipes,	2
Tonsils,	1
Tuberculosis, lung,	1
Tuberculosis, meninges,	1
Tuberculosis, other organs,	6
Worms,	1
Whooping cough,	4
Other conditions,	15

Ultra-violet light clinic—Public Health Department.

This out-patient clinic was opened on 26th November, 1928.

Number of patients treated (all over one year),	17
Number of attendances,	78

Conditions treated :—

Rickets, severe—5 cases. Three improved and gained weight, 2 remained stationary.

Rickets, medium—3 cases. Two improved and gained weight, 1 improved.

Underweight—5 cases. Three gained in weight, 1 improved but did not gain, 1 died.

Infantile paralysis—2 cases. One gained in weight, but local condition did not improve, 1 died of intercurrent disease.

Debility following diphtheria—1 case. Patient improved and gained weight.

Tuberculosis of abdomen—1 case. The local condition improved, the child gained weight and became mentally more alert.

FOOD AND MILK—

Number of applications for food or milk—

Mothers, expectant,	128	}	...	...	143
Mothers, nursing,	15				
Children, ... ..	...	...	...	...	500
Approximate cost of milk,	...	..	..	..	£713

Dried milk substitutes—

Number of children on Glaxo, ... ..	...	34
Number of children on Cow & Gate, ... ..	...	43
Number of mothers on Almata, ... ..	...	17
The net cost of this provision was	£13 0s 10d	

All of these cases were certified on medical grounds as requiring milk, and all were considered necessitous.

During 1928 a change was made in the arrangements for the provision of milk and dried milk substitutes, and the following scheme was adopted :—

(a) The provision of fresh milk will be 1 pint per day, or $1\frac{1}{2}$ pints in exceptional cases, and of dried milk substitutes, where necessary, according to the quantity required, up to a maximum of 1 lb. per week.

(b) The following scale of necessity will be adopted :—

Husband, wife and 1 child,	...	...	£1	3	6
" " " 2 children,	...	...	1	7	0
" " " 3 " "	...	...	1	9	0
" " " 4 " "	...	...	1	11	0
" " " 5 " "	...	...	1	13	0
" " " 6 " "	...	...	1	15	0
" " " 7 " "	...	...	1	17	6
" " " 8 " "	...	...	2	0	0

(c) Where the income is above the scale, no grant of fresh milk will be made, but dried milk substitutes will be provided at cost price.

(d) Where the income is equal to or below the scale, fresh milk free and dried milk substitutes at half price will be given only if considered necessary by the Medical Officer after medical examination on account of illness or for the maintenance of health.

(e) The following will be eligible for receipt of milk :—

(1) Children up to 5 years.

(2) Expectant mothers during the last three months of pregnancy.

(3) Nursing mothers up to 10 months after confinement, provided they are continuing breast feeding.

(f) Grant of milk will be given for such period not exceeding one month as may be considered necessary by the Medical Officer of Health and the supply will only be continued on further certification by him after medical examination at regular intervals.

MEASLES—

Number of cases notified (notification voluntary, by householder),	...	...	...	1,509
Number of deaths, {	from measles,	...	...	81
	from sequelæ (included above),	...	...	74
Number of cases removed to hospital,	..	..	..	17
Number of special domiciliary visits,	...	...	...	1,781
Number of special staff engaged,	...	...	...	Nil

WHOOPING COUGH—

Number of cases notified (notification voluntary, by householder),	...	...	374
Number of deaths,	{ from whooping cough, ...		37
	{ from sequelæ (included above),		26
Number of cases removed to hospital,	..		13
Number of special domiciliary visits,	...		Nil.

OPHTHALMIA NEONATORUM—

Number of cases notified	{ by medical practitioner, 4	}	39
	{ by midwives, ... 35		
	{ by institutions, ... —		
Number of cases proved to be gonococcal,	..		Nil.
Number treated in Eye Infirmary (out-patients),			7
Number of cases in which there was appreciable			
loss of vision,	... ..		Nil.

PROVISION OF MIDWIFERY SERVICES IN NECESSITOUS CASES—

Corporation Midwife.—The Corporation midwife resigned her position on 15th May and no new appointment was made. The following figures show the work carried out by her during part of the year:—

Number of confinements,	...	...	57
Number of visits entailed,	...	...	758
Number of ante-natal visits,	...	...	190

The following scheme came into operation on 16th May for the provision of midwifery services in necessitous cases:—

1. Expectant mothers unable to pay for the services of a midwife shall apply to the Medical Officer of Health for payment of the midwifery fee at their confinement. Such application must be lodged by the end of the sixth month of pregnancy stating the name of the midwife chosen, and containing a promise to attend the ante-natal clinic for supervision.

2. Investigation shall be made by the Public Health Department regarding the income of the household, and whether maternity benefit is due.

3. Applications shall not be granted where maternity benefit is payable.

4. Where maternity benefit is not payable the application will be dealt with by the Medical Officer of Health and granted if the income is equal to, or less than the scale of necessity hereinafter

specified, and refused if the income is over that scale, provided that exceptional cases, where there would appear to be some hardship, may be submitted to the Maternity and Child Welfare Sub-Committee, who will have the power to deal therewith.

Husband, wife and 1 child,	...	...	£1	3	6
" " " 2 children,	...	...	1	7	0
" " " 3 " "	...	...	1	9	0
" " " 4 " "	...	...	1	11	0
" " " 5 " "	...	...	1	13	0
" " " 6 " "	...	...	1	15	0
" " " 7 " "	...	...	1	17	6
" " " 8 " "	...	...	2	0	0

5. Where the application is granted the chosen midwife who conducts the confinement will be paid by the Corporation a fixed fee of 25/-.

6. Such midwives as wish to undertake these cases shall be under an obligation to send them to the ante-natal clinic for supervision during the last 3 months of pregnancy.

The number of cases dealt with under the new arrangements was as follows:—

Number of applications received,	...	...	166
Number of applications granted,	...	...	69
Number of applications refused	{ maternity benefit, 48 } { over scale, 11 } { late application, 11 }		
			70
Number of applications under consideration,	...	...	27
Total amount expended,	...	...	£71 5/-

GREENOCK CORPORATION MATERNITY HOSPITAL—

	Mothers.	Children.
Number in Hospital at 31st		
December, 1927,	—	—
Number of admissions during 1928,	104	2
Number of live births during 1928,	—	86
Number of stillbirths,	—	8
Number of deaths,	7	6
Number of discharges during 1928,	96	81
Number in Hospital at 31st		
December, 1928,	1	1

(1) Ante-natal cases—

22

Conditions Found.	Result of Treatment.
6 Albuminuria,	4 treated, delivered, recovered. 2 treated, discharged, improved.
3 Eclampsia, -	treated, delivered, recovered.
3 Ante-partum hæmorrhage,	treated, delivered, recovered.
3 Cardiac disease, -	1 treated, delivered, recovered. 1 treated, improved. 1 treated, delivered, died.
3 False Labour, -	1 discharged before delivery. 2 discharged well after delivery.
3 Excessive vomiting,	2 treated, recovered, discharged. 1 treated, delivered, died.
1 Hysterical fits, -	- treated, discharged.

(2) Abortions—

Condition Found.	Results of Treatment.
1 Five months' pregnancy,	{ complete abortion, recovered, discharged.

(3) Abnormal and Complicated Confinements, 30

Conditions Found.	Results of Treatment.
10 Contracted pelvis,	{ 5 caesarean section, recovered. 1 caesarean section, died of pneumonia. 1 caesarean section, died of excessive vomiting. 1 craniotomy, recovered. 1 internal version, recovered. 1 forceps delivery, recovered.
8 Delay of 2nd stage,	forceps delivery, recovered.
2 Eclampsia -	{ 1 delivered normally, died. 1 forceps delivery, recovered.
2 Breech presentation,	{ manual delivery under anæsthetic, recovered.
2 Placenta prævia,	{ internal version under anæsthetic, recovered.
2 Twin labour,	delivered under anæsthetic, recovered.
1 Cardiac disease,	forceps delivery, died.
1 Ante-partum hæmorrhage, -	{ internal version under anæsthetic, recovered.
1 Rigid cervix, -	Craniotomy, died.
1 Face presentation, -	Normal delivery, recovered.

HOSPITALS FOR SICK CHILDREN—

Children's Hospital, Shaw Place.

Number in hospital at 1st January, 1928,	-	22
Number admitted during 1928,	-	176
Number discharged,	-	151
Number died,	-	25
Number remaining in hospital at 31st Dec., 1928,	-	22

The following were the conditions present and the results of treatment in children admitted during 1928:—

CONDITION.	Cases.	Improved.	Not Improved.	Died.	Sent home or transferred to Gateside Hospital.	Cases remaining at 31st December, 1928.
Abscess of neck,	1	1	...	...	...	...
Adenitis,	1	...	1	...	...	...
Bronchitis,	9	5	...	1	...	3
Broncho-pneumonia,	14	6	...	5	2	1
Burn (perineum),	1	...	...	...	...	1
Diarrhoea,	8	6	...	...	1	1
Eczema,	1	1	...	...	...	...
Facial paralysis,	1	1	...	...	...	...
Gastro-enteritis,	16	8	1	5	2	...
Impetigo,	7	4	1	...	1	1
Infantile Paralysis,	2	1	1	...	...	...
Marasmus,	18	7	1	5	3	2
Measles, sequelae—						
Debility,	20	15	4	1	...	...
Meningeal condition,	1	1	...	...	...	...
Paralysis,	1	1	...	...	...	...
Pneumonia,	3	3	...	...	...	...
Septic conditions,	3	2	...	1	...	...
Rickets,	56	34	6	...	5	11
Septic conditions,	3	3	...	...	...	...
Tetany,	3	3	...	...	...	...
Tuberculosis—						
Abdomen,	2	1	...	...	...	1
Foot,	1	...	...	...	1	...
Spine,	1	...	...	1	...	...
Generalised,	2	1	...	...	...	1
Whooping Cough, sequelae						
Debility,	1	1	...	...	...	...
TOTAL,	176	105	15	19	15	22

Number of cases of Infectious Diseases which occurred during 1928.

CONDITION.	Cases.	Sent Home.	Treated in Hospital.	Transferred to Gateside Hospital.
Chickenpox,	4	1	3	..
Measles,	17	...	17	...
Whooping Cough,	10	7	..	3

MIDWIVES (SCOTLAND) ACT, 1915.

BIRTHS :—

Total number of births (corrected).	Total number of deaths of new-born children (within 10 days).	Number of births attended by midwives.	Number of deaths of new-born children (within 10 days) occurring in the practice of midwives.	Number of cases not attended by doctor or midwife.	
				Births.	Deaths.
1,902	62	1,479	41	Nil.	Nil.

CASES OF OPHTHALMIA NEONATORUM :—

Total number of cases.	Number of cases occurring in the practice of midwives.	Number of cases occurring where confinement not attended by doctor or midwife.
39	35	Nil.

CASES OF PUERPERAL SEPSIS :—

Total number of cases.	Total number of deaths.	Number of cases occurring in the practice of midwives.	Number of deaths occurring in the practice of midwives.	Number of cases occurring where confinement not attended by doctor or midwife.	
				Births.	Deaths.
7	1	1	1	Nil.	Nil.

CASES OF STILLBIRTH (DEAD BORN CHILDREN):—

Number of cases.	Number of cases occurring in the practice of midwives.
55	33

Of the 55 cases, 8 occurred in the Maternity Hospital where abnormal cases are treated.

CASES OF EMERGENCY:—

There were 328 cases of emergency, namely:—

Pernicious vomiting, 2; Threatened abortion, 2; Complete abortion, 4; Hydramnios, 1; Eclampsia, 3; Placenta praevia, 1; Ante-partum haemorrhage, 13.

Delayed labour, 55; Contracted pelvis, 19; Foot presentation, 1; Breech presentation, 16; Occipito-posterior presentation, 9; Brow presentation 1; Face presentation, 2; Prolapse of cord, 4; Twins (Head and shoulder presentation), 2.

Adherent placenta, 13; Post-partum haemorrhage, 3; Ruptured perineum, 57; Collapse of patient, 2; Illness of patient, 23; Phlegmasia alba dolens, 1; Pain in leg (12th day), 2; Rise of temperature, 21; Rectal abscess, 1.

Illness of Child, 18; Cleft palate, 2; Spina bifida, 5; Meningocele and prematurity, 1; Prematurity, 20; Inflammation of eyes, 1; Convulsions, 7; Stillbirths, 15; Death of Child, 1.

NOTIFICATIONS—

The following notifications required under the rules of the Central Midwives' Board and the Public Health (Ophthalmia Neonatorum) Regulations (Scotland), 1918, were received:—

Notification of stillbirth,	..	...	...	33
Notification of having advised artificial feeding,	...	...	...	13
Notification of death,	...	...	...	8
Notification of having laid out a dead body.	...	...	...	11
Notification of liability to be a source of infection,	...	...	...	1
Notification of ophthalmia neonatorum,	...	...	..	35

SUPERVISION—

Forty-five midwives notified their intention to practice within the burgh, but only 34 were actually in practice. Of the latter 31 resided in the burgh of Greenock, two in the burgh of Port-Glasgow, and one in the burgh of Gourock.

One hundred and thirty-eight supervisory visits were made by the Inspectors of Midwives during the year. It was found necessary to report one midwife to the Central Midwives' Board for negligence in reporting a case of puerperal fever and general inefficiency, and as a result her name was removed from the roll, her certificate cancelled, and in addition thereto, in terms of section 8 of the Midwives (Scotland) Act, 1915, she was prohibited from attending women in childbirth in any other capacity.

Apart from that the work of the midwives appeared to be satisfactorily performed.

VENEREAL DISEASES.

MALES.—

The clinical duties at the special treatment centre, Greenock Royal Infirmary, were taken over by the Medical Officer of Health on 28th May, 1928, but the work during the rest of the year was carried out on the general lines laid down by Dr. H. C. Donald, Paisley, who had been responsible for the clinic since its opening in 1923, and to whose splendid work great tribute is due.

The advisability of extending the building to provide more adequate irrigation accommodation and other necessary facilities was under consideration at the end of the year.

The following figures show the number of attendances at the centre since 1923 :—

Year ending 31st December.	New Cases.	Attendances at Clinics.	Attendances at Centre.	Total.
1923	182	1,592	7,562	9,154
1924	160	2,054	8,490	10,544
1925	178	2,363	10,070	12,463
1926	176	2,923	13,041	15,964
1927	189	2,845	14,090	16,935
1928	194	3,083	14,551	17,634

There has also been an increase in the number of specimens examined, as is shown in the following table:—

Year ending 15th May.	Scraping for Spirochetes.	Smear for Gonococci.	Blood for Wasserman Test.
1923	10	65	47
1924	39	179	153
1925	15	284	138
1926	20	489	172
1927	37	789	182
1928	30	809	213
1929	76	1,008	200

The Wassermann tests were carried out, as formerly, at the Public Health laboratory, Glasgow, and the other specimens were examined in the centre.

The following is a record of the cases dealt with during the year ending 15th May, 1929:—

	On register 16th May, 1928.	New Cases	Ceased to attend.	Transferred to other centres.	Dis- charged.	Remaining 15th May, 1929.
Syphilis, ...	68	44	23	11	11	67
Gonorrhoea, ..	14	80	22	8	54	40
Soft chancre, ...	...	7	1	2	2	2
Mixed infections.	4	5	3	..	...	6
Other conditions, (non-venereal).	4	46	...	..	46	4

Three patients suffering from gonorrhoea, 1 from soft chancre 1 from mixed infection and 1 from suspected venereal disease were sent for in-patient treatment to the venereal diseases wards of Craw Road Hospital, Paisley, during the year, and the average period of residence was 64 days.

FEMALES.—The treatment of female patients was carried out on the same lines as formerly. Most cases of syphilis were treated at the Shaw Place centre, but all patients with gonorrhoea or double infections were sent to Glasgow centres. The provision of full treatment facilities at the Reception House was under

consideration at the end of the year and there is every prospect that the work there will soon be begun.

The following figures show the work done during the year:—

Type of Case.	On register 1st January, 1928.	New Cases.	Attendances of New Cases.	Total Attendances.
Syphilis (Shaw Place),	24	25	336	726
Syphilis (Glasgow), ...	17	2	42	175
Gonorrhoea,	9	9	87	269
Double Infections, ...	3	1	8	38

Type of Case.	Discharged.	Transferred to other centres.	Ceased to attend.	Died.	Remaining at 31st Dec., 1928.
Syphilis (Shaw Place),	1	3	16	1	28
Syphilis (Glasgow), ...	5	3	4	...	7
Gonorrhoea,	2	..	5	..	11
Double Infections, ...	2	...	...	...	2

Two cases of syphilis and one of gonorrhoea received institutional treatment in Glasgow.

One hundred and forty-four specimens of blood were examined by the Wassermann test—56 for diagnostic purposes and 88 to ascertain the result of treatment, while 30 vaginal smears were examined at the male centre.

HOSPITAL ACCOMMODATION AND AMBULANCE ARRANGEMENTS.

GREENOCK AND DISTRICT COMBINATION HOSPITAL, GATESIDE—

The infectious diseases hospital gave, as usual, excellent service during the year, and accommodation was found for all cases sent for treatment.

The question of accommodating more cases of pneumonia, measles and whooping cough was discussed with the Medical Superintendent, who stated that if considerable numbers of cases of these diseases were to be sent during epidemic periods, there would arise at once a difficulty of insufficient accommodation for

the increased staff that would be necessary to deal with them. In view of the comparatively large numbers of deaths from these three conditions, it seems desirable that more use should be made of hospital treatment, and it would, therefore, be of advantage if the matter of the provision of increased staff accommodation were fully considered by the Hospital Board.

I am indebted to the Medical Superintendent for the following information regarding the treatment of cases, and the results obtained:—

I.—CASES TREATED CLASSIFIED ACCORDING TO DISEASE.

DISEASE.	Cases in Hospital 1st January, 1928.	Admitted during 1928.	Discharged during 1928.	Died in Hospital.	Cases remaining in Hospital 31st December, 1928.	Fatality Rate.
Diphtheria, ...	45	277	269	9	44	2.7
Erysipelas, ...	1	7	7	1	...	12.5
Scarlet Fever, ...	15	82	87	1	9	1.08
Puerperal Fever, ...	...	4	3	1	...	25.0
Measles, ...	...	28	27	1	...	3.5
Typhus Fever, ...	...	...	...	...	...	...
Tuberulosis, ...	30	57	39	20	28	22.9
German Measles, ...	...	3	2	...	1	...
Enteric Fever, ...	...	4	4	...	...	...
Other Diseases, ...	...	45	22	17	6	37.7
Total, ...	91	507	460	50	88	8.36

II.—CASES CLASSIFIED ACCORDING TO DISTRICTS FROM WHICH ADMITTED.

DISTRICT.	Cases in Hospital 1st January, 1928.	Admitted during 1928.	Discharged during 1928.	Died in Hospital.	Cases remaining in Hospital 31st December, 1928.
Greenock, ...	80	401	357	44	80
Gonrock, ...	6	39	42	1	2
Port-Glasgow, ...	3	61	53	5	6
County, ..	2	6	8	...	...
Total, ...	91	507	460	50	88

III.—AVERAGE PERIOD OF RESIDENCE OF PATIENTS DISCHARGED DURING 1928.

DISEASE.	Discharged during 1928.	Aggregate Number of Days' Residence.	Average Days' Residence.
Scarlet Fever, ...	87	3,660	42.6
Diphtheria, ...	269	11,429	42.4
Tuberculosis, ...	39	6,183	158.5

IV.—CASES ADMITTED FROM THE BURGH OF GREENOCK CLASSIFIED ACCORDING TO DISEASE.

DISEASE.	Cases in Hospital 1st January, 1928.	Admitted 1928.	Discharged 1928.	Died 1928.	Cases remaining 31st December, 1928.	Fatality Rate.
Diphtheria, ...	37	215	205	9	38	3.57
Erysipelas, ...	1	6	6	1	...	14.2
Scarlet Fever, ...	12	59	62	1	8	1.4
Puerperal Fever, ...	...	3	2	1	...	33.3
Measles, ...	...	21	20	1	...	4.7
Tuberculosis, ...	30	57	39	20	28	22.9
German Measles, ...	...	3	2	...	1	...
Enteric Fever, ...	...	4	4	...	...	...
Other Diseases. ...	...	33	17	11	5	33.3

The hospital motor ambulance has given continuous service since 1912, and the provision of a new vehicle was under consideration at the end of the year.

WEST RENFREWSHIRE COMBINATION SMALLPOX HOSPITAL.

No cases were admitted to this hospital during the year.

The old ambulance of the Johnstone Combination Infectious Diseases Hospital was purchased by the Smallpox Hospital Board at a cost of £75, and £26 was expended on overhauling and painting it. The Medical Superintendent of the Johnstone Hospital will arrange for its despatch when required, and it will be driven by the chauffeur of that hospital. It is satisfactory to note that the smallpox hospital is now a complete skeleton unit, ready for use when necessity arises.

BACTERIOLOGICAL EXAMINATIONS.

No change was made in the arrangements for the examination of bacteriological specimens, and as formerly the Medical Superintendent of the Greenock and District Combination Hospital carried out the work.

The following table gives the numbers, results and cost of the examinations made:—

Nature of Specimen.	Positive.	Negative,	Total.	Cost.
Blood,	3	20	23	£11 6 6
Throat mucus,	142	595	737	166 1 0
Sputum,	68	462	530	92 11 0
Cerebro-spinal fluid, ... ..	...	1	1	0 7 6
Urethral discharge,	1	4	5	1 6 0
Urine, ... ..	...	1	1	0 5 6
Pus, ... ..	...	2	2	0 11 0
Faeces. ... ..	...	1	1	0 5 6
Total,	214	1,086	1,300	£272 14 0

On the instructions of the Public Health Committee a report on the provision of a corporation laboratory was submitted, but it was decided to defer further consideration of the matter until the question of other office accommodation for the department, which had been under investigation, was finally settled.

SERA, VACCINES, AND INSULIN.

ANTI-DIPHTHERIA SERUM.—The emergency supply of diphtheria antitoxin at the Central Police Station and Gateside Hospital was kept up during the year. One hundred thousand units were supplied in this way, and 180,000 units were purchased at a cost of £11 5/-.

ANTI-MENINGOCOCCUS SERUM.—No new supply was purchased during the year and on no occasion was it found necessary to use the existing stock.

T.A.B. VACCINE.—Twelve doses of this vaccine were purchased during the year at a cost of £1 7/- and 10 doses were issued to the Medical Superintendent of Smithston Hospital for the inoculation of members of his staff.

INSULIN.—In May the previously existing scheme for the provision of Insulin was discontinued and the following new arrangement substituted:—

(1) Insulin will be supplied only to medical practitioners.

(2) Any medical practitioner who has a patient requiring Insulin, but unable to pay for all or part of it, should communicate with the Medical Officer of Health, giving the name and address of the patient, the daily dose he intends to administer, and the total amount he desires to have supplied.

(3) The Public Health Department will make investigation into the financial condition of the patient's family and supply the drug to the doctor, if it appears that the patient is definitely unable to buy it for himself.

Where the patient is able to meet a part of the cost, arrangements will be made accordingly.

A temporary supply will be arranged for when necessary, if it appears that the investigation will cause delay.

(4) The supply of the drug will be ordered through the Scottish Board of Health.

These arrangements, of course, do not refer to persons insured under the National Health Insurance Acts. An attempt was thus made to ensure that all persons receiving Insulin at the expense of the local authority were actually under medical supervision. Five thousand units were purchased during the year at a cost of £5, and 3,900 were supplied to two patients.

PORT SANITARY ADMINISTRATION.

During 1928 forty-nine incoming liners from Canada and United States of America were boarded by the staff of the Public Health Department. Of the above number thirty-four ships arrived outwith the usual office hours. The amount of passenger traffic coming to Greenock is steadily increasing, as is shown by the following yearly number of ships which have been dealt with by the department:—

1924,	...	...	..	12
1925.	...	...	...	24
1926,	...	...	...	20
1927,	...	...	...	28
1928,	...	...	...	49

Three cases of whooping cough, two of measles and one of chickenpox were removed to Gateside Hospital, and two of pneumonia to Greenock Royal Infirmary. The Medical Officers of the districts to which contacts were proceeding were notified when necessary.

Fifty-four aliens referred to him by the Immigration Officer were examined and passed by the Medical Officer.

During the year Greenock was placed upon the list of ports authorised to issue to ship owners who apply for them the deratisation and deratisation exemption certificates for which provision is made in the International Sanitary Convention of 1926. One deratisation exemption certificate was issued during 1928 for a new ship proceeding on her first voyage.

Attention has been paid to the question of the egress of rats from vessels arriving from foreign ports, and arrangements have been made whereby a weekly list of all ports in which cases of plague have occurred during the previous three months is sent to the Harbour Master, who notifies the captain of any vessel inward bound from any such port that he is required to take precautions to prevent rats leaving his ship. A member of the staff of the department visits as soon as possible to ensure that the measures taken are adequate and satisfactory.

DISINFECTION.

HOUSE DISINFECTION.

Disinfection of all presumably infected clothing, and at least the room which the patient inhabited, is carried out as a terminal measure in all houses where infectious disease has existed. In single apartment houses, and in certain other circumstances, it is sometimes necessary to remove the family to the Reception House in order that these minimum requirements may be fulfilled, but there is seldom any difficulty in making the necessary arrangements.

During the year, following on experiments which proved exclusively that formaldehyde vapour, used under ordinary conditions of house disinfection, had no effect whatever on the growth of diphtheria organisms, its use was discontinued and spraying with formalin and izal substituted.

The department is occasionally asked to disinfect rooms and clothing after illnesses which cannot be considered infectious, and it was decided during the year to make a uniform charge of 5/- for all such disinfections carried out.

DISINFECTING STATION.

The work in the station was carried out without hitch during the year, although several minor repairs, overhauls and replacements of the machinery were necessary.

The use of formaldehyde was discontinued in favour of other methods.

The number of articles dealt with totalled 10,009, and of these 9,435 were disinfected and washed and 574 disinfected only, while 420 in addition were destroyed by request. The following figures show the number of articles disinfected by the different means of disinfection in use:—

Steam Disinfector, - -	3,030
Bactocene Solution, - -	2,495
Formaldehyde, - -	4,394
Clayton Apparatus, - -	90

On one occasion the Clayton apparatus was very successfully used to disinfect a small steam yacht which had become infested with vermin.

RECEPTION HOUSE.

Table X. shows that very little use was made of the Reception House during the year for the housing of contacts of the ordinary infectious diseases, but in the future it is intended to utilise some of the accommodation for the purpose of cleansing of verminous persons, and for the treatment of such cases of scabies as require to be so dealt with.

As previously mentioned, the advisability of converting the annex into an east-end maternity and child welfare clinic, which could also be used for the treatment of women suffering from venereal diseases, was under consideration at the end of the year.

MILK AND DAIRIES.

A considerable amount of preliminary work was done during the year in connection with dairy premises, water supplies and methods of milk production in their relation to the bye-laws which came into force during 1927, and it is hoped that in 1929

some headway may be made in improving the conditions under which milk is produced within the burgh. This process, however, must of necessity be a gradual one, particularly as far as the premises are concerned, but there is no doubt that the powers now possessed by the Local Authority will allow of considerable progress being made. In this connection, however it must be kept in mind that although suitable premises are essential, the secret of the production of clean, wholesome milk lies in well thought out method and constant personal supervision by a careful responsible person who has developed the clean milk conscience and is prepared to take pains.

It is a matter for regret that no applications have yet been received for licenses to produce or sell graded milk in the burgh but it is hoped that such will soon be forthcoming.

It was not found necessary to stop the milk supply from any farm during the period under review, and although several cases of infectious diseases occurred in milk producing farms no difficulty was experienced in dealing with the matter and no spread of infection through the milk was encountered. Most dairymen appear to be fully alive to their responsibilities under the Milk and Dairies Act, 1914.

The Veterinary Inspector reports that the standard of health and cleanliness of the cows in the district is a very satisfactory one and in only five cases was action found necessary. One cow suffered from mastitis and two from abscesses of the udder, and the milk from these was not used for human consumption until the condition had completely cleared up. Two cases were found to have tuberculous disease of the udder and both were slaughtered, one under the Tuberculosis Order, 1925, and the other on the owner's responsibility. Eighteen samples of milk were examined from cows with abnormal udders and two were found on guinea pig inoculation to contain tubercle bacilli.

MEAT INSPECTION.

The work at the slaughterhouse continued to be satisfactory, and the arrangements for meat inspection during the year remained unaltered.

I am indebted to Mr Peter McIntyre, M.R.C.V.S., Veterinary Inspector, for the information given in the following table:—

CLASS.	Number Slaughtered.	Number affected with Tuberculosis.	Percentage affected with Tuberculosis.	Whole Carcases seized for Tuberculosis.	Parts of Carcases seized for Tuberculosis.	Whole Carcases seized for diseases other than Tuberculosis.	Parts of Carcases seized for diseases other than Tuberculosis.
Bullocks	2,262	154	6.8	—	11	1	1
Bulls,	144	40	27.7	—	3	—	—
Cows,	803	508	63.2	12	45	11	7
Heifers,	1,022	96	9.3	1	10	1	2
Swine,	2,095	151	7.2	1	8	3	7
Sheep,	11,515	—	—	—	—	20	3
Calves,	1,723	9	0.52	4	—	13	3
Total,	19,564	958	4.89	18	77	49	23

The following is the list of conditions other than tuberculosis which were responsible for the total or partial seizure of carcasses:—

Total Seizure.—Abscesses, 1; arthritis, 1; decomposition, 17; dropsy, 11; emaciation, 2; fevered flesh, 4; immaturity, 6; mastitis, septic, 1; melanosis, 1; peritonitis, 1; prematurity, 1; sarcomatosis, 1; septicaemia, 1.

Partial Seizure.—Abscesses, 1; adhesions, 2; arthritis, 1; arthritis, suppurative, 1; injuries, 14; osteomalacia, 1; peritonitis, 1.

HOUSING.

I have to thank the Master of Works and the Director of Housing for the following figures regarding houses certified for occupancy in the burgh during 1928:—

(1) Corporation Subsidy Housing Schemes.—328 houses.

South Craigieknowes Area.—One hundred and twenty-eight flatted houses of two apartments.

Bow Farm Area.—Forty-eight flatted houses of three apartments.

Hole Farm Area.—Sixty-four flatted houses of three apartments, 8 cottages of three apartments, and 80 cottages of four apartments.

(2) Corporation Slum Clearance Schemes.—114 houses.

Sinclair Street Area.—Fifty-four tenement houses of two apartments, and 60 tenement houses of three apartments.

(3) Private Enterprise.—19 houses.

These comprised 3 cottages of four, seven and eight apartments, 1 bungalow of five apartments, 5 semi-detached bungalows of four, five and seven apartments, 8 terraced houses of five apartments and 8 altered houses of five apartments.

SLUM CLEARANCE.

One of the most important, if not the most important, problem awaiting solution by the Corporation is the method of dealing with the burgh's incubus of slums. A certain amount of inferior property is almost inevitable in most industrial communities, but if a constant war of attrition is not waged against it the slum demon will in time gain a strangle hold on the welfare of the community, which in turn will inevitably react on trade and commerce, producing the vicious circle at the centre of which lies decay.

Much has indeed been done, but more awaits. In a report by the Medical Officer and Sanitary Inspector, drawn up during the year, it was estimated that 1,490 houses were necessary for the rehousing of slum dwellers. The majority of these will be required before any real headway can be said to have been made, and although there is still a considerable number of properties scattered throughout the burgh which are fit to be the subject of closing orders, the "central area" should undoubtedly receive first attention.

The Local Authority have practically completed the rehousing schemes to which they were committed. To take no further action could not be called in any sense economy, and if the "central area" is to be tackled in earnest, the future policy must be worked out with great care and forethought, avoiding precipitate action, but looking far ahead and working slowly and

steadily on a complete plan prepared beforehand, taking into account the question of town planning at the same time. The day is surely not very far off when a transformed Vennel will be one of the main shopping centres of the town, and the present inhabitants of Market Street, Smith's Lane and Cowgate live in municipal houses raised up from the ruins of their present time worn dwellings.

The* problem is essentially one of finance, for the actual demolition, rearrangement and reconstruction of buildings, houses and streets would present little difficulty provided the expenditure could be met. It might be argued that the rates are already too high, and that it would be safer to wait until a more favourable period arrives. On the other hand no great enterprise was ever carried through without taking risks, and where the future health and welfare of the community seem to be at stake, surely it is worth while to take the risk.

The grant at present received in respect of slum clearance schemes is on the same basis for all urban communities, rich or poor, and quite irrespective of the problem with which each is faced, but it may not be too much to hope that in the near future the grant will be adjusted rather on the disproportion between the work to be done and the wealth of the district, or alternatively, that special grants will be made to areas with a particularly heavy burden.

FACTORIES AND WORKSHOPS.

On the register kept by the Local Authority there were 261 workshops, including factory bakehouses.

Four hundred and forty-two visits of inspection were made during 1928 by the Sanitary Inspector and the following conditions which were contrary to the requirements of the Public Health (Scotland) Act, 1897, and the Factory and Workshop Act, 1901, were discovered :—

(1) Want of cleanliness,	-	-	-	7
(2) Unsuitable or defective sanitary conveniences,				2
(3) Other nuisances,	-	-	-	6

In connection with these defects 16 notices were served upon the occupiers and also on the owners where work of a structural nature was involved, and in every case the defects were satisfactorily remedied.

As required by section 107 (1c) of the Factory and Workshop Act, two lists involving 186 outworkers were received in February and August, and one intimation relating to one outworker resident outwith the burgh was transmitted to the appropriate local authority. The work performed by these outworkers was knitting and crocheting and was carried out in all cases under satisfactory hygienic conditions.

WATER SUPPLY.

The water supply of the burgh proved adequate for all demands made upon it during the year, and the quarterly analyses made by the Public Analyst showed that it was in all respects suitable for domestic purposes.

The minimum amount in store occurred on 9th June, when there was 158 days' supply in the reservoirs.

DRAINAGE.

Flooding again occurred in Nelson Street and West Burn Square during exceptional rainfall, but is hoped that the alterations carried out in the sewers in Roxburgh Street and Duncan Street along with other works under consideration at the end of the year will prevent recurrence of the condition. There was also a certain amount of flooding in the east-end of the town, and measures to deal with it are at present under consideration.

Apart from these spasmodic floodings during heavy rainfall the drainage of the burgh was satisfactory.

RIVERS POLLUTION.

No complaints with regard to pollution of streams were received during the year, and no administrative action was considered necessary.

NUISANCES.

No medical certificates were required in connection with nuisances as defined in section 16 of the Public Health (Scotland) Act, 1897.

METEORIOLOGY.

I am indebted to Mr MacAlister, M.Inst., C.E., Engineer and Superintendent of Water Works, for the following information regarding the rainfall throughout the year. All the observations were made at the Prospecthill filters, which are situated 200 feet above sea level.

The total rainfall amounted to 84.95 inches, which is to be compared with 70.59 in 1927 and 62.29, the mean of the 30 years 1890-1919:—

MONTH.	Air Pressure. Mean Reading at Station Level and 32° C.	Air Temperature.		Rainfall in inches.	Number of days on which .01 or more fell.	Humidity per cent.
		Maximum.	Minimum.			
January, -	29.310	46.1	36.7	15.52	30	86
February, -	29.577	46.0	36.4	6.41	20	85
March, - -	29.517	44.7	36.6	5.58	26	87
April, - -	29.518	51.5	39.8	3.46	17	79
May, - -	29.725	58.9	43.9	1.97	9	72
June, - -	29.546	60.3	45.7	7.01	25	77
July, - -	29.685	60.9	51.0	4.70	21	81
August, -	29.554	64.0	52.3	5.38	21	80
September, -	29.817	59.6	47.7	5.79	16	80
October, -	29.422	53.4	44.4	10.98	25	83
November, -	29.370	49.5	40.1	9.87	23	86
December, -	29.667	43.6	36.0	8.28	21	85

PROPAGANDA.

Through the courtesy of Mr Ryrie Orr a monthly health bulletin was, from June onwards, published in the "Greenock Telegraph," giving the number of deaths from various causes, the number of cases of infectious disease, the birth-rate and infantile mortality figure, while special paragraphs were incorporated from time to time dealing with health matters in general, and with particular subjects as there appeared to be necessity. By this means it is hoped to interest the public in health subjects, to allay groundless fears regarding undue prevalence of infectious diseases, and to carry information to those who cannot be reached by other means. Information is not lacking that certain of these objects have been achieved.

A copious supply of printed leaflets regarding various diseases was always readily available on the counter of the Public Health Office and callers were invited to help themselves. A special

pamphlet was prepared in the department giving information on measles and instructions to parents how to deal with it during the epidemic period, and these were distributed to all households in which cases occurred. This was found to be a very useful measure. In addition numerous illustrated informative posters were displayed in the Public Health Office and in the Child Welfare Clinic.

During the year three public meetings were held. The first on March 26th was addressed by Dr. McKail on "Physical Fitness—How Attained and Maintained," and there was a fairly good attendance. The second was a meeting for men only and was addressed by Dr. Clark, Glasgow, on the subject of venereal disease, when the Town Hall was well filled. The third was for women only and was addressed by Dr. Elizabeth Smith, Glasgow, again on the subject of venereal disease, when there was a very full attendance.

In November a well attended public meeting was held at which it was decided to form a Greenock and district branch of the Scottish Health League, and there is no doubt that if this venture achieves success it will be of great assistance to the local authority in their efforts to disseminate health information.

APPENDIX.

TABLE I.—VITAL STATISTICS.

(A) BIRTHS, DEATHS AND MARRIAGES

	Numbers Registered in District.	Transfers.		Corrected Number.		
		Out.	In.	Both Sexes.	Males.	Females.
Total Births (including Illegitimate), -	1,882	16	39	1,905	947	958
Illegitimate Births, -	83	9	15	89	42	47
Marriages, - -	471	...	...	...	..	...
Deaths, - - -	1,277	70	40	1,247	621	626

(B) DEATHS AND DEATH-RATES IN AGE GROUPS.

Ages.	Population Estimated at Mid-Year by M.O.H.	Number of Deaths.	Percentage of Total Deaths.	Death-rate per 1000 of the Population.	Average Death-rate per 1000 of population during preceding 5 years.
Under 1 Year, -	2,113	228	18.28	107.90	93.49
From 1—5 Years, -	7,065	169	13.55	23.92	16.43
" 5—10 " -	8,418	45	3.61	5.34	2.70
" 10—15 " -	7,877	11	0.88	1.39	
" 15—25 " -	14,868	51	4.09	3.43	
" 25—35 " -	12,215	60	4.81	4.91	8.83
" 35—45 " -	10,044	76	6.10	7.56	
" 45—55 " -	8,124	119	9.54	14.64	
" 55—65 " -	4,915	136	10.91	27.67	78.89
" 65—75 " -	2,622	216	17.32	82.37	
" 75—85 " -	850	113	9.06	132.94	
" 85 and over, -	93	23	1.85	247.31	
Total. -	79,204	1,247	100.00	15.74	13.89

TABLE II.—CAUSES OF DEATH (corrected for Transfers)—REGISTRAR GENERAL—1928.

	ALL AGES.			AGE.										
	Both Sexes.	Males.	Females.	1—	5—	10—	15—	25—	35—	45—	55—	65—	75—	85 and over.
				—1	—5	—10	—15	—25	—35	—45	—55	—65	—75	—85 and over.
Enteric Fever, - - - - -	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever, - - - - -	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox, - - - - -	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles, - - - - -	81	36	45	24	56	...	...	...	...	1	...	...	...	...
Scarlet Fever, - - - - -	1	1	27	18	22	1	...	...	...	...	...	...	...	...
Whooping Cough, - - - - -	41	14	9	1	5	1	...	...	...	...	...	...	...	...
Diphtheria, - - - - -	14	5	7	1	1	...	...	...	...	...	...	...	...	...
Influenza, - - - - -	15	8	7	3	1	...	...	...	...	2	1	...	...	...
Encephalitis Lethargica, - - - - -	2	1	1	1	...	...	...	...	...	1	...	...	...	...
Cerebro-Spinal Meningitis, - - - - -	2	1	1	2	1	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases, - - - - -	6	4	2	2	3	...	...	...	...	...	...	...	...	...
Tuberculosis of Respiratory System, - - - - -	63	42	21	7	3	1	12	18	9	10	5	3	...	...
Tuberculosis of Intestines and Peritoneum, - - - - -	11	4	7	1	5	2	...	1	...	...	...	...	...	...
Tuberculosis of Meningitis, - - - - -	6	3	3	2	2	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases, - - - - -	10	8	2	1	1	1	3	2	1	26	...	...	...	...
Malignant Tumours, - - - - -	111	47	64	...	...	...	...	...	...	...	...	...	...	...
Rheumatic Fever, - - - - -	4	1	3	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not Cerebro-Spinal or Tuberculous)	16	8	8	8	...	1	...	...	...	...	...	...	...	...
Apoplexy, - - - - -	108	47	61	...	...	...	...	...	...	...	...	...	...	...
Heart Disease, - - - - -	120	55	65	...	1	...	...	...	...	...	...	...	...	...
Diseases of Arteries, - - - - -	12	8	4	...	...	...	...	...	...	...	...	...	...	...
Bronchitis, - - - - -	62	25	37	13	5	...	...	...	...	...	...	...	...	...
Pneumonia (all forms), - - - - -	134	82	52	29	7	1	6	7	10	14	10	18	7	...
Other Diseases of Respiratory System, - - - - -	13	6	7	3	...	...	...	...	...	...	...	...	...	...
Diarrhoea and Enteritis (under 2 years), - - - - -	20	11	9	14	...	...	...	...	...	...	...	...	...	...
Appendicitis, - - - - -	16	11	5	...	...	...	...	...	...	...	...	...	...	...
All Diseases of Liver (not Malignant), - - - - -	8	3	5	1	...	...	...	...	...	...	...	...	...	...
Nephritis, Acute and Chronic, - - - - -	29	13	16	...	...	...	...	...	...	...	...	...	...	...
Puerperal Sepsis, - - - - -	1	...	1	...	...	...	...	...	...	...	...	...	...	...
Other Dis. and Acc. of Preg. and Parturition, - - - - -	12	...	12	...	...	...	...	...	...	...	...	...	...	...
Disease of Early Infancy and Malformations, - - - - -	91	46	45	90	...	...	...	...	...	...	...	...	...	...
Suicide, - - - - -	6	4	2	...	...	...	...	...	...	...	...	...	...	...
Other Violent Deaths, - - - - -	38	28	10	...	...	...	...	...	...	...	...	...	...	...
Other Defined Diseases, - - - - -	175	88	87	18	5	2	5	2	4	1	4	3	1	...
Diseases ill-defined or Unknown, - - - - -	19	11	8	3	1	...	...	...	...	...	...	...	...	...
ALL CAUSES, - - - - -	1,247	621	626	1,228	465	111	51	60	76	119	136	216	113	23

CAUSES OF DEATH.

CAUSES OF DEATH.	District.												T. tal.	Death-rate per 1000 of Population.	
	A.			B.			C.			D.					
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.			
Enteric Fever,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox,	12	12	24	7	11	18	16	20	36	1	2	3	36	45	81
Measles,	1	8	9	3	9	12	7	9	16	1	1	1	11	27	41
Scarlet Fever,	4	4	8	2	1	3	2	2	4	1	3	4	5	9	11
Whooping Cough,	1	4	5	...	1	1	1	2	4	3	2	5	8	7	15
Diphtheria,	3	2	5	...	...	...	1	1	2	...	...	...	1	1	2
Influenza,	...	...	...	...	...	...	1	1	2	...	1	2	1	1	2
Encephalitis Lethargica,	...	1	1	13	2	15	15	10	25	1	1	2	1	1	2
Cerebro-Spinal Meningitis,	10	7	17	...	6	6	12	15	27	4	2	6	42	21	63
Other Epidemic Diseases,	2	...	2	...	1	1	2	1	3	...	...	...	4	7	11
Tuberculosis of Respiratory System,	1	1	2	3	...	3	2	1	3	1	...	...	3	3	6
Tuberculous Meningitis,	2	1	3	...	...	...	2	2	4	1	1	2	8	2	10
Tuberculosis of Intestines and Peritoneum,	15	18	33	12	9	21	14	14	28	6	23	29	47	64	111
Other Tuberculous Diseases,	1	1	2	...	...	...	...	...	...	1	1	1	...	3	4
Malignant Tumours,	1	1	2	2	2	4	3	4	7	1	1	1	8	16	20
Rheumatic Fever,	2	2	4	10	6	16	11	24	35	7	11	18	42	57	99
Meningitis (not Cerebro-Spinal or Tuberculous),	14	16	30	6	9	15	20	17	37	14	18	32	61	62	123
Apoplexy,	21	18	39	6	...	...	3	2	5	4	1	5	10	6	16
Heart Disease,	3	3	6	...	...	...	...	...	...	1	1	2	25	37	62
Diseases of Arteries,	10	10	20	8	10	18	6	16	22	1	1	2	82	52	131
Bronchitis,	33	17	50	15	11	26	24	18	42	10	6	16	6	6	12
Pneumonia (all forms),	2	1	3	1	2	3	3	3	6	...	2	2	11	9	20
Other Diseases of Respiratory System,	2	6	8	2	1	2	7	1	8	2	2	2	11	5	16
Diarrhea and Enteritis (under 2 years),	5	3	8	1	1	2	1	1	4	...	1	1	3	4	7
Appendicitis,	2	2	4	...	...	...	1	1	2	...	6	6	11	13	24
All Diseases of Liver (not Malignant),	4	2	6	2	...	...	5	5	10	...	...	...	...	...	...
Nephritis, Acute and Chronic,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Sepsis,	...	2	2	...	4	4	...	4	...	...	1	1	...	11	11
Other Dis. and Acc. of Preg. and Parturition,	22	18	40	14	8	22	7	14	21	1	4	5	44	44	88
Diseases of Early Infancy and Malformations,	...	...	...	...	...	...	2	1	3	...	1	1	4	2	6
Suicide,	...	...	...	...	...	...	7	2	9	...	3	1	4	10	38
Other Violent Deaths,	11	5	16	7	2	9	2	2	4	...	15	20	35	94	193
Other Defined Diseases,	28	36	64	11	19	30	40	24	64	1	1	1	8	8	16
Causes Ill-defined or Unknown,	3	5	8	...	...	...	4	3	7	...	...	...	...	...	...
ALL CAUSES,	214	201	415	121	115	236	210	201	411	76	109	185	621	626	1247
															15.7423

TABLE V.—SOURCES OF NOTIFICATIONS OF INFECTIOUS DISEASES—1928.

DISEASE.	BY WHOM REPORTED.						Total.
	House-holders.	House-holders & Doctors.	Doctors.	Public Health Officers.	School Medical Officers.	Registrars.	
Pneumonia, -	...	2	48	...	...	97	147
Enteric Fever, -	...	...	5	...	...	...	5
Diphtheria, -	...	32	199	...	...	...	231
Scarlet Fever, -	...	11	56	...	...	...	67
Puerperal Fever, -	...	1	6	...	...	...	7
Erysipelas, -	...	3	38	...	...	...	41
Cerebro-Spinal Meningitis, -	...	...	1	...	...	...	1
Acute Poliomyelities, -	...	...	16	...	...	...	16
Measles, -	2,279	4	25	14	2	11	2,335
Chickenpox, -	65	120	166	...	...	...	351
Whooping Cough, -	644	4	18	2	2	6	676
Encephalitis Lethargica, -	...	...	4	...	...	...	4
Malaria, -	...	...	2	...	...	...	2
Acute Infective Jaundice, -	...	...	2	...	...	...	2
Scabies, -	...	...	1	...	...	...	1
Trachoma, -	...	...	2	...	...	...	2
TOTAL, -	2,988	178	599	16	1	114	3,898

TABLE IV.—POPULATION AND PRINCIPAL RATES
PER 1,000—REGISTRAR GENERAL—1881-1928.

Year.	Population.	Death-rate.	Birth-rate.	Infantile Mortality Rate.	Tuberculosis Death-rate.	
					Pulmonary.	Non- Pulmonary.
1881	69,492	21.94	39.00	123	2.77	1.20
1882	70,520	22.55	39.80	133	2.36	1.10
1883	71,562	24.96	39.76	148	2.06	0.85
1884	72,621	20.56	39.18	128	2.43	0.80
1885	73,695	20.98	32.31	163	2.14	0.89
1886	74,795	17.25	33.42	117	1.91	0.72
1887	75,892	19.82	29.85	148	1.89	0.72
1888	77,015	15.79	28.68	106	1.64	0.66
1889	66,489	20.33	34.44	132	2.06	0.61
1890	66,175	21.44	34.78	132	2.68	0.78
1891	63,432	22.54	32.55	163	1.82	0.56
1892	63,027	19.74	35.83	116	2.01	0.65
1893	62,713	20.90	32.96	134	1.59	0.65
1894	62,400	19.23	32.20	133	2.09	0.49
1895	62,090	23.06	33.84	152	1.62	0.82
1896	61,781	17.84	33.08	120	1.76	0.55
1897	61,475	22.17	33.05	159	2.06	0.68
1898	61,170	21.38	35.20	136	2.07	0.83
1899	67,269	19.64	31.01	142	1.70	0.83
1900	67,776	19.18	32.50	130	1.59	0.84
1901	68,264	19.45	29.84	132	1.46	0.90
1902	68,756	19.85	31.74	122	1.81	0.94
1903	69,252	18.93	29.56	144	1.68	0.80
1904	69,749	17.65	30.09	123	1.20	0.93
1905	70,253	18.78	30.49	116	1.31	1.05
1906	70,758	17.89	32.21	127	1.34	1.25
1907	71,269	17.79	30.25	104	1.54	1.08
1908	71,783	17.00	30.31	118	1.21	1.12
1909	73,214	15.01	26.73	95	1.09	1.09
1910	74,667	18.87	28.85	129	1.16	0.96
1911	75,028	18.44	30.73	113	1.50	0.95
1912	76,337	18.70	31.30	119	1.44	1.02
1913	77,156	18.22	31.03	116	1.47	0.86
1914	77,642	18.04	32.84	108	1.00	0.91
1915	77,695	20.14	29.49	145	1.15	0.91
1916	78,642	17.10	29.20	109	1.42	0.75
1917	79,299	15.10	26.88	92	1.28	0.83
1918	79,574	17.88	26.52	110	1.10	0.82
1919	79,613	17.25	28.73	99	0.94	0.59
1920	80,436	16.51	33.34	104	1.06	0.69
1921	81,120	14.59	30.15	93	1.01	0.54
1922	81,370	19.17	27.68	149	1.03	0.68
1923	81,522	12.94	27.04	77	0.99	0.54
1924	82,096	15.22	24.16	113	1.00	0.44
1925	81,200	14.32	24.54	107	0.85	0.52
1926	81,558	13.74	23.87	90	0.98	0.34
1927	80,889	13.26	22.17	89	0.87	0.44
1928	79,204	15.74	24.05	120	0.80	0.34

TABLE VI.—MONTHLY INCIDENCE OF INFECTIOUS DISEASES—1928.

MONTH.	Pneumonia.	Enteric Fever	Diphtheria	Scarlet Fever.	Puerperal Fever.	Erysipelas.	Malaria	Fever.	Acute Anterior Polomyelitis.	Encephalitis.	Measles.	Whooping Cough.	Chickenpox.	Trachoma.	Scabies.	Cerebro-Spinal Meningitis.	Acute Infective Jaundice.	Total
January,	31	...	12	2	1	3	...	...	...	1	409	62	53	...	...	...	2	576
February,	10	...	12	6	...	2	...	...	...	...	801	80	24	...	...	...	...	935
March, ...	13	...	24	5	1	6	...	...	...	...	765	89	11	...	...	...	...	914
April, ...	26	1	7	4	...	6	...	...	...	...	250	116	4	...	...	...	...	414
May, ...	6	...	18	5	1	2	...	...	1	1	60	76	31	...	...	...	...	201
June, ...	1	...	8	5	...	6	...	...	1	...	18	50	24	1	...	...	...	114
July, ...	11	1	13	5	...	2	...	...	...	...	9	20	14	...	...	...	...	75
August,	7	2	15	4	...	2	...	...	...	...	7	54	11	...	...	...	...	102
September,	6	1	26	5	2	4	...	1	4	...	4	38	19	...	1	1	...	112
October,	10	...	30	8	1	3	...	1	6	1	7	22	32	1	...	...	...	122
November	5	...	29	13	1	2	...	...	2	...	2	40	60	...	...	...	...	154
December,	21	...	37	5	...	3	...	...	2	1	3	29	68	...	...	...	...	169
TOTAL,	147	5	231	67	7	41	2	16	1	2335	676	351	2	1	1	2	3888	

TABLE VII — DISTRICT INCIDENCE OF INFECTIOUS DISEASES WITH NUMBER OF REMOVALS TO HOSPITAL—1928.

DISTRICT.	CASES.	Pneumonia.	Enteric Fever	Diphtheria.	Scarlet Fever	Eruptive Fever.	Erysipelas.	Malarial Fever.	Chickenpox.	Measles.	Whooping Cough.	Euchephalitis Lethargica.	Cerebro-Spinal Meningitis.	Acute Anterior Poliomyelitis.	Jaundice.	Scabies.	Trachoma.	Total.
A.	{ Ascertained, } Removed,	50	1	62	16	2	10	..	114	768	240	1	..	8	..	..	..	1,272
B.	{ Ascertained, } Removed,	30	..	42	7	2	1	1	1	6	4	..	..	1	..	..	..	92
	{ Ascertained, } Removed,	1	..	41	7	2	10	1	79	412	152	..	..	2	..	..	1	738
C.	{ Ascertained, } Removed,	49	4	81	34	2	16	..	140	919	235	2	1	2	1	..	1	1,487
	{ Ascertained, } Removed,	1	3	81	34	..	2	..	..	12	4	..	..	4	1	..	..	137
D.	{ Ascertained, } Removed,	16	..	46	10	1	5	1	17	232	46	1	..	2	..	..	..	380
	{ Ascertained, } Removed,	..	..	41	10	..	1	..	..	3	..	1	..	2	..	..	..	58
SHIPS	{ Ascertained, } Removed,	2	..	..	..	..	..	..	1	4	3	..	..	..	..	1	..	11
	{ Ascertained, } Removed,	*2	..	..	..	..	..	..	1	1	3	..	..	..	..	1	..	11
TOTAL.	{ Ascertained, } Removed,	147	5	231	67	7	41	2	351	2,335	676	4	1	16	2	1	2	3,888
	{ Ascertained, } Removed,	4	4	224	66	4	6	..	3	20	15	1	..	3	..	1	..	361

x Diagnosed in Royal Infirmary.

* Removed to Royal Infirmary.

+ One died before removal.

7 cases of diphtheria also had measles.
1 case of diphtheria also had chickenpox.
1 case of diphtheria also had scarlet fever.
19 case of measles also had whooping cough.
1 case of measles also had chickenpox.
1 case of scarlet fever also had chickenpox

(Each of these 30 patients has thus been entered as 2 cases in the Table).

TABLE VIII.—HOUSE INCIDENCE OF INFECTIOUS DISEASES WITH NUMBERS TREATED AT HOME AND IN HOSPITAL—1928.

[illegible]

* 2 in Royal Infirmary.

TABLE IX.—MONTHLY INCIDENCE AND PERCENTAGE
MORTALITY RATE OF
MEASLES AND WHOOPING COUGH—1928.

MONTH.	MEASLES.		Total.	Deaths.	Percentage of Deaths to Cases ascertained.	WHOOPING COUGH.		Total.	Deaths.	Percentage of Deaths to Cases ascertained.
	With Medical Attendance.	Without Medical Attendance.				With Medical Attendance.	Without Medical Attendance.			
January, ...	246	163	409	4	0.97	30	32	62	2	3.22
February, ...	441	360	801	10	1.24	20	60	80	7	8.75
March, ...	397	368	765	40	5.22	45	44	89	5	5.61
April, ...	131	119	250	22	8.80	33	83	116	9	7.75
May, . . .	24	36	60	2	3.33	31	45	76	5	6.57
June, ...	12	6	18	2	11.11	23	27	50	2	4.00
July, ...	5	4	9	...	...	8	12	20	2	10.00
August, ...	4	3	7	...	...	19	35	54	1	1.85
September, ...	1	3	4	...	...	20	18	38	2	5.26
October, ...	5	2	7	1	14.28	5	17	22	...	...
November, ..	2		2	...	...	11	29	40	2	5.00
December, ...	2	1	3	...	...	14	15	29	4	1.37
TOTAL	1270	1065	2335	81	3.46	259	417	676	41	6.06

TABLE X.—NUMBER OF FAMILIES AND PERSONS.
AND AVERAGE PERIOD OF RESIDENCE
IN RECEPTION HOUSE—1928.

MONTH.					Reason for Admission.					Total.
	Number of Families.	Number of Persons.	Number of Days' Residence.	Average Stay per Person	To allow of disinfection after Scarlet Fever.	To allow of disinfection after Diphtheria.	To allow of removal of mother to hospital—Diphtheria.	Scabies.	Vermineous.	
January, ...	...	...	...	...	...	...	...	...	...	...
February, ...	1	7	14	2	7	...	...	...	...	7
March, ...	...	...	...	...	...	...	...	...	...	...
April, ...	1	1	4	4	...	...	...	...	1	1
May, ...	...	...	...	...	...	...	...	...	...	...
June, ...	...	...	...	...	...	...	...	...	...	...
July, ...	...	...	...	...	...	...	...	...	...	...
August, ...	1	4	12	3	4	...	...	...	...	4
September, ...	1	2	6	3	2	...	...	...	...	2
October, ...	3	11	71	6.45	...	4	3	4	...	11
November, ...	...	...	...	...	...	...	...	...	...	...
December, ...	1	6	23	3.83	6	...	...	...	...	6
TOTAL,	8	31	130	4.19	19	4	3	4	1	31

Number of Families admitted during the year. 8

„ Persons „ „ „ 31

Average period of residence, 4.19 days.